

ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH

OF THE
St. Albans Urban Sanitary District
AND THE
St. Albans Rural Sanitary District,

FOR THE YEAR 1893,

BY
JOHN MORISON,

M.D., D.P.H., F.G.S., ETC.,

Medical Officer of Health,
etc., etc.

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METEOROLOGY.

The mean temperature of the year 1893 was 50.0° , which is considerably over the average of recent years. The mean daily range of the thermometer was 16.7° . The highest recorded temperature was on August 18th, when 91° F. was recorded. The lowest temperature was 14.7° on January 5th. The maximum was 111.2° and the minimum 2.9° , above the maximum and minimum of 1892.

January was rather a cold month, with a small daily range of temperature, rather cloudy, with about the average humidity, and rather more than the average rainfall on an unusually large number of days. The mean temperature was 34.4° . The minimum was 14.7° (on the 5th). The maximum 50.2° (on the 31st). The daily range 8.7° . The rainfall (rain or snow) was 2.01 inches on 24 days. The maximum rainfall was 0.38 inch on the 26th.

February was rather warm, with about the average daily range of temperature, rather cloudy, with rather over the average humidity, and a very heavy rainfall on an unusually large number of days. The mean temperature was 39.5° . The minimum was 22.9° (on the 6th). The maximum 56.3° (on the 19th). The daily range 11.0° . The rainfall (rain or snow) 3.36 inches on 23 days. The maximum rainfall was 0.40 inch on the 21st.

March was a warm month, with a large daily range of temperature, a bright sky, a dry atmosphere, and a very small rainfall on very few days. The mean temperature was 45° . The minimum 25.4° on the 19th. The maximum 65.5° on the 31st. The daily range 19.4° . The rainfall (rain or snow) 0.51 inch on six days. The maximum rainfall was 0.26 inch on the 1st.

April was very warm, with an exceedingly large daily range of temperature, a very dry atmosphere, a very bright sky, and scarcely any rain which fell only on the 16th and 29th. The mean temperature was 51.5° . The minimum 28.8° on the 14th. The maximum 77.6° , on the 20th.

The daily range 25.6° . The rainfall 0.14 inch on two days. The maximum rainfall 0.08 inch on the 29th.

May was very warm, with a large daily range of temperature, a dry atmosphere, a bright sky, and a very small rainfall on very few days. The mean temperature was 56.2° . The minimum 37.4° on the 8th. The maximum 78.2° on the 15th. The daily range 20.8° . The rainfall 1.65 inches on eight days. The maximum rainfall 0.93 inch on the 17th.

June was warm, with a large daily range of temperature, with a very dry atmosphere, a sky of average brightness, and an exceedingly small rainfall on very few days. The mean temperature was 60.6° . The minimum 37.9° on the 1st. The maximum 86.1° on the 17th. The daily range 22.1° . The rainfall 0.72 inch on eight days. The maximum rainfall 0.16 inch on the 22nd.

July was very warm, with a considerable daily range of temperature, a very dry atmosphere, a bright sky, and about an average rainfall on a large number of days. There were several thunderstorms. The mean temperature was 62.6° . The minimum 47.1° on the 28th. The maximum 84.6° on the 7th. The daily range 17.2° . The rainfall 3.06 inches. The maximum rainfall 0.87 inch on the 12th.

August was excessively warm, with a large daily range of temperature, with a very dry atmosphere, a sky of average brightness, and a rather small rainfall on a small number of days. There were several thunderstorms. The mean temperature was 65.1° . The minimum 42.9° on the 29th. The maximum 91.0° on the 18th. The daily range 19.1° . The rainfall 2.1 inches. The maximum rainfall 0.38 inch on the 1st and 23rd.

September was of average temperature, with a rather large daily range, a dry atmosphere, a bright sky, and a rather small rainfall on a small number of days. The mean temperature was 56.1° . The minimum 38.9° on the 24th. The maximum 78.6° on the 6th. The daily range 17.4° . The rainfall 1.08 inches on 11 days. The maximum rainfall 0.2 inch on the 19th and 28th.

October was a warm month on the whole, though cold towards the end, with a considerable daily range of temperature, with an average humidity, a very bright sky, and a very heavy rainfall on the average number of days. The

mean temperature was 50.1° . The minimum 30.0° on the 31st. The maximum 64.7° on the 16th. The daily range 14.3° . The rainfall 5.07 inches on 17 days. The maximum rainfall 2.02 inches on the 9th.

November was rather cold, with considerable daily range of temperature, average humidity, cloudy sky, and rather heavy rainfall. The mean temperature was 40.5° . The minimum 26.1° on the 1st. The maximum 59.2° on the 3rd. The daily range 12.2° . The rainfall (rain or snow) 2.89 inches on 19 days. The maximum rainfall 0.75 inch on the 3rd. There was a heavy snowstorm on the 18th.

December was a warm month on the whole, with considerable daily range of temperature, average humidity and cloudiness, and a rather heavy rainfall on the average number of days. The mean temperature was 38.8° . The minimum 20.1° on the 3rd. The maximum 54.8° on the 13th. The daily range 11.6° . The rainfall (rain or snow) 2.41 inches on 17 days. The maximum rainfall 0.44 inch on the 12th.

The Winter was rather above the average in temperature, although it included a period of very cold weather, and the rainfall rather above the average on a large number of days.

The Spring was exceptionally warm, bright, and dry, the temperature being 5.9° above the average, and the rainfall not much over a third of the average. An exceptional season altogether.

The Summer was also very warm, bright, and dry, with a temperature 3.7° over the average, and a rainfall 29 per cent. under the average.

The Autumn was rather warm, with a dry atmosphere and a bright sky. The rainfall was rather over the average, owing to the very heavy rainfall in October.

On the whole the year was exceptionally warm, the temperature being over the average throughout the year, and very markedly so in the Spring and Summer. On the whole there was a deficient rainfall, the weather being exceptionally dry in Spring and early Summer, although the rainfall was somewhat over the average in the Winter and Autumn.

The rainfall during the year was 25 inches, somewhat under the average, though not very much less than the rainfall of 1892. The wettest months were February, July,

and October, when altogether there were 11·46 inches of rain. The driest month was April, when only 0·14 inch of rain fell, but March and June were also excessively dry. The humidity throughout the year was below the average.

Altogether 1893 was a most exceptional year.

ST. ALBANS, 1893.

Mean Temperature	- - - - -	50·0°
Maximum	„ - - - - -	91·0° (August)
Minimum	„ - - - - -	14·7° (January)
Rainfall	- - - - -	25·0 inches
Maximum Rainfall	- - - - -	2·02 inches (Oct. 9)

The approximate average rainfall of St. Albans for a long period is 26 to 27 inches.

Winter Mean Temperature	- - - - -	37·5°
„ Rain	- - - - -	7·78 inches
Spring Mean Temperature	- - - - -	50·9°
„ Rain	- - - - -	2·03 inches
Summer Mean Temperature	- - - - -	61·8°
„ Rain	- - - - -	5·88 inches
Autumn Mean Temperature	- - - - -	49·9°
„ Rain	- - - - -	9·04 inches



REPORT
OF THE
MEDICAL OFFICER OF HEALTH
OF THE
St. Albans Urban Sanitary District.

TO THE MAYOR AND CORPORATION OF THE CITY OF
ST. ALBAN.

GENTLEMEN,

I beg to inform you that during the year 1893 there have been 218 deaths in the City of St. Alban. 37 of these deaths were in the parish of St. Alban, 85 in St. Peter's parish, 28 in St. Michael's, 2 in St. Stephen's, 2 in Sandridge, 7 in the Hospital, 4 in the temporary Smallpox Hospital, 2 in the Sisters' Hospital for Infectious Diseases, 49 in the Union Workhouse, and 2 in the Prison.

Taking the population as estimated up to the middle of 1893 to be 13,320, this would give us a death-rate of 16·2 per annum. 31 however of the 49 deaths which occurred in the Workhouse, 3 of those in the Hospital, 1 of those in the Smallpox Hospital, 1 of those in the Sisters' Hospital, and the 2 deaths occurring in the Prison, were of persons who did not belong to our City. Deducting therefore these 38 cases, we get 180 as the corrected number of deaths, and 13·5 per annum as the true death-rate.

Last year the total death-rate was 21, and the corrected death-rate was 18·8. Thus we see that, in spite of the epidemics of Smallpox and Scarlet Fever which have visited us, our death-rate has fallen so greatly that in 1893 it has been less than three-quarters of that of the previous year. The death-rate is indeed lower than it has been for a

number of years past, and very markedly lower than it has been since Influenza became a frequent visitor amongst us. This speaks well for the general sanitary condition of our City, which I always maintain ought to be and is one of the healthiest places in the Country.

Forty-three of the deaths were of children under 1 year of age, giving us a death-rate for infants of 3·2 as against 4·7 in 1892. Twelve were of children between 1 and 5, and seventy-five of persons of 65 years old and upwards.

21 deaths occurred from various Zymotic diseases, viz., 5 from Smallpox, 2 from Scarlet Fever, 2 from Diphtheria, 4 from Typhoid, 6 from Diarrhœa, and 1 from Influenza, giving us a Zymotic death-rate of 1·5, as against 3·1 for 1892. There were 43 deaths from diseases of the Respiratory System, as against 61 last year; 19 deaths from diseases of the Heart and great Blood-vessels, as against 32; and 21 from diseases of the Nervous System. There were 23 deaths from Phthisis and 9 from other Tubercular maladies, giving us a death-rate for Phthisis of 1·7 and for Tubercle 2·4. There were 10 deaths from Cancer and 69 from various other diseases.

The mortality amongst infants under 1 year of age is lessened materially, and amongst children between 1 and 5 it is less than half what it was in 1892. There is a decrease in the number of deaths at all ages.

This striking difference in the death-rate of young children is due entirely to the absence of the ravages made by Measles and Whooping Cough in 1892; and it confirms most emphatically the advice which I have pressed on you for several years past, viz., that you should include Measles and Whooping Cough in the list of notifiable diseases. The diminutions in the number of deaths in middle-aged and old people is no doubt due in great part to the lessened prevalence of Influenza, though the warm and genial weather experienced in the Spring and early Summer had also a favourable influence.

There were 4 deaths from Accident or Violence during the year. One of a young man of 23, who was accidentally run over by a ballast train on the Midland Railway, and died some weeks afterwards from the injuries so received. One of a man aged 76, who accidentally set fire to some straw on which he was sitting, and being stiff from Rheumatism and unable to rise quickly, was severely

burnt and died in the Hospital a few days afterwards. One of an old woman aged 88, who accidentally fell downstairs; and one of a woman aged 62, who was run over by a train and killed on the L. & N. W. Railway.

There were 9 Inquests held during the year. One on a male child of 5, who was stated to have died of Bronchitis. One on a man aged 75, who died in the Workhouse from Broncho-pneumonia after an injury to the ribs. One on a male child of 8 months, who was stated to have died of "Consumption of the Bowels." One on a man aged 22, who died in the Prison from "Ulceration of the Larynx and Consumption." One on a man aged 43, who also died in the Prison from Bronchitis; and 4 on the cases of death from Accident or Violence mentioned above.

There were 3 uncertified deaths. One of a female child of 4 months; another of a male child of 9 months, who were stated to have died of Bronchitis and Convulsions respectively; and one on a young married woman aged 23, who is said to have died of "failure of the heart's action after a miscarriage," where the Coroner did not think it necessary to hold an inquest.

During the past year there have been 331 births—179 of males and 152 of females. The excess of births over deaths was 113. There were 114 births in the parish of St. Alban, 172 in St. Peter's, 33 in St. Michael's, 8 in Sandridge, and 4 in the Union Workhouse.

Thirteen of these births were illegitimate, so that the proportion of illegitimate to legitimate births was 39 per thousand, which is considerably lower than it was for the preceding year.

The birth-rate for the year 24·9 is exceedingly low, lower than it has been for many years past.

The rate of mortality amongst children under 1 year of age was 129·1, while last year it was 172·4.

In the beginning of the year our City was visited by a tolerably severe epidemic of Smallpox, and it was thought desirable, in order to secure the proper isolation of the cases, that hospital accommodation should be provided. An iron hospital was therefore purchased by the Corporation and erected on a site close to the Union Workhouse. It was opened for the reception of patients on Feb. 4th. Altogether 36 cases of Smallpox were treated here, including 9 from the Rural district. The epidemic was

thereby kept within bounds and prevented from becoming of a more serious nature.

In addition to these cases, there were at the beginning of the epidemic 11 cases of Smallpox treated in the Infectious Ward of the Union Workhouse before the hospital was ready, and 11 treated at their own homes. The epidemic lasted from Dec. 12th, 1892, to July, 1893, when the last case was discharged and the hospital closed. Out of this number there were 6 deaths, 4 of whom were unvaccinated. Out of the 58 cases, 48 were vaccinated, 11 of whom were severe cases, or 23 per cent., and 2 of whom died, or 4·1 per cent.; 1 of the deaths being caused by pneumonia, which was an accidental complication. Out of the 10 unvaccinated cases, 1 had had a previous attack of Smallpox, and in his case, being partially protected, the attack was a mild one. Of the 9 other unvaccinated cases, 8 were severe confluent cases, or 88 per cent., and 4 died, or 44 per cent. I may mention that in nearly all the severe cases in vaccinated persons the vaccine marks were very indistinct, and only in 1 case were there 3 good marks.

That is to say, 23 per cent. of the vaccinated cases were severe, and 4·1 per cent. died; but of the unvaccinated, 88 per cent. were severe, and 44 per cent. died.

Not a single case of Smallpox occurred in a person who had been at any time successfully re-vaccinated.

It is a thousand pities that vaccination has within the last few years become almost a dead letter among us, and I fear that in the future we shall have to pay most heavily in health and in pocket for our culpable neglect of one of the greatest discoveries of modern preventive medicine.

This has been most especially a year of epidemics, for in the latter half of the year we were visited by an epidemic of Scarlet Fever. The first two cases were notified to me in January; there was another in April; two more in June, but the disease did not really assume an epidemic form before the end of July. Altogether 76 cases of Scarlet Fever have been notified to me, or come under my observation. The disease has fortunately on the whole been of a mild type, only 2 deaths having occurred.

Several cases of Typhoid Fever have occurred during the year; one in February in Lower Dagnall Street, where a faulty condition of the house drains was discovered. In

the month of May 5 cases occurred in one house in Mount Pleasant, where on making an inspection a markedly insanitary condition of the premises was discovered; and in May and June 3 cases occurred in another family in St. Michaels. Another case occurred in Lattimore Road in May; and in September a case of Typhoid was admitted into the Workhouse from the Rural District; and another case occurred in December in London Road.

There were only 2 cases of Diphtheria, 1 in October in London Road, and 1 in November in Midland Terrace.

During the summer months there was a considerable amount of Diarrhoea amongst us, no doubt due in part to the unusual heat of the weather, and six deaths are ascribed to that cause, mostly amongst young children.

One death from Measles occurred in January, but there have been no further cases since that date.

I have great pleasure in congratulating the citizens of St. Albans on the possession of a well-built and well-appointed Hospital for the isolation and treatment of Infectious Diseases. On July 20th the Sisters' Hospital, provided by the munificence of our generous neighbour and benefactor, Sir J. Blundell Maple, was opened for the reception of patients.

Up to the end of the year 69 cases of Scarlet Fever were treated here, 13 of them coming from the Rural District. Among these cases there was 1 death. 1 case of Diphtheria (from the Rural District) was also treated here, which proved fatal. I very much regret that Sir Blundell Maple did not think proper to erect a Disinfecting Chamber in accordance with the most approved modern ideas. The Disinfector at the Sisters' Hospital is simply a hot air chamber, in which it is almost impossible to get up a heat sufficient to properly disinfect any articles of clothing or bedding without charring them. The only efficient means of disinfecting blankets, beds, etc., is by means of superheated steam. I represented this to the architect of the Hospital before it was finished, but I regret to say he refused to carry out my suggestions. I think it a matter of surpassing importance that we should have an efficient Disinfector, as without it our Isolation Hospital is really of comparatively little use. I hope that the Committee of Management will see their way to provide a Steam Disinfecting Apparatus with as little delay as possible. I am

very pleased that the Urban Authority have decided to throw the Hospital open to all residents in the City free of charge. As the isolation is for the benefit of the community at large, it is only just that the community at large should pay for it, and besides, in practice it has been found that even a small charge has a tendency to prevent most of the poorer members of society from availing themselves of the benefits of the Hospital. After the Hospital had been open for some months it was thought desirable to appoint a permanent Matron, and Miss Alice Rees was chosen out of a number of applicants; a lady who produced testimonials of the very highest order, and who was, besides, strongly recommended by Mr. Wynter Blyth, the well-known Medical Officer of Marylebone. Miss Rees entered upon her duties on Dec. 13th.

Altogether 139 cases of Infectious Diseases have been notified to me, viz., 39 of Smallpox, 77 of Scarlet Fever, 12 of Typhoid, 8 of Erysipelas, 2 of Diphtheria, and 2 of Puerperal Septicaemia. Most of these cases I have visited personally, and in nearly all I am convinced that all reasonable care has been taken to prevent the disease from spreading. Last year only 33 cases were notified in all.

I have inspected the Markets on various occasions and found everything in a tolerably satisfactory condition.

In the beginning of the year I inspected a number of cottages in Watson's Row, and found their sanitary condition so bad, that on my certificate they were closed until the necessary repairs and alterations to render them habitable had been executed.

I have visited all the various parts of the City throughout the year, and taken such action as seemed to me desirable in the interests of Public Health.

I have inspected the various bakehouses within the City, and have found most of them in a fairly satisfactory state.

I have also inspected the slaughter-houses, and found them all in a fairly satisfactory condition.

The water supplied by the Water Works Company throughout the year has been pure and wholesome. Although the Spring and Summer were extremely dry there was no scarcity of water, and we had a plentiful supply during the whole of the drought. I must repeat what I have said on three previous occasions, that in the interests

of the public it is much to be desired that some efficient means of softening the water supplied to us should be adopted. The only drawback to the St. Albans water is its excessive hardness.

The drainage of the City is carried out in a thorough and efficient manner, and the sewage is satisfactorily disposed of at the Sewage Farm. In connection with this subject I must refer again to the manholes. During last Summer they were extremely offensive, owing to the want of rain and the consequent difficulty in keeping the sewers sufficiently flushed.

Some months ago a Committee of the Council was appointed to take the matter into consideration and report. I still think, as I mentioned in my Report for 1891, that the erection of a sufficient number of Holman's Sewer-gas Destructors in suitable situations would be an efficient means of ventilating the sewers and doing away with all nuisance. But if this is impracticable on account of the expense, I sincerely hope and trust that the Council will not be tempted to close the manholes and substitute ordinary shafts for the purpose of ventilation. The draught in such shafts would be altogether insufficient, and we should run a very serious risk of getting an accumulation of foul gases in the sewers, the increase of pressure from which would have a tendency to force our traps, and allow the sewer gas to enter our houses, a condition of things which would be infinitely worse and more dangerous than any disagreeable smells in the open air.

Drs. Corfield and Louis Parkes in Stephenson and Murphy's Treatise on Hygiene, recently published (the most exhaustive work on the subject in the English language), recommend that where the manholes give off an offensive smell that their action should be supplemented by constructing shafts, six inches or more in diameter, leading from the crown of the sewer to the sides of the road and thence up houses or buildings, clear from all windows and chimneys. These shafts would act principally as exits for foul air, while the manhole ventilators would become inlets, and nuisance to a great extent would be obviated. This is what I should recommend; but I assure you that it would be worse than useless to attempt to ventilate your sewers by shafts alone. Erect supplemental shafts and take care that the sewers are sufficiently

flushed, and I am convinced you will get rid of the offensive smells.

In the beginning of the year, owing to the increasing pressure of other duties, Mr. Ford found it necessary to resign the post of Inspector of Nuisances, and in March last Mr. James Savage was appointed as his successor, who has since then carried on the various duties devolving upon him with zeal and assiduity.

In conclusion, I beg to thank the members of the Council for their courtesy and consideration.

My best thanks are also due to Mr. Ford and the present Inspector of Nuisances for their valuable assistance.

JOHN MORISON, M.D., D.P.H.,

Medical Officer of Health.



R E P O R T
OF THE
Medical Officer of Health
FOR THE
St. Albans Rural Sanitary Authority.

GENTLEMEN,

During the year 1893 there were 194 deaths recorded in the St. Albans Rural Sanitary District—98 of males and 96 of females. There were 29 deaths in St. Peter's parish; 27 in St. Stephen's; 5 in St. Michael's; 13 in Sandridge; 59 in Harpenden; 33 in Wheathampstead; and 28 in Redbourn. Last year the total number of deaths in the district was 218.

The number of deaths in St. Peter's, St. Stephen's, Harpenden, and Wheathampstead was slightly over the average of the last three years, while in St. Michael's, Sandridge, and Redbourn the number was under the average.

Taking the district as a whole, the number of deaths was somewhat under the average of recent years, and considerably lower than in the years 1891 and 1892.

Taking the population of the district as estimated up to the middle of 1893 to be 14,350, we should have a death-rate of 13·6.

But in order to get the true death-rate, we must add to the 194, 15 deaths which occurred in the Union Workhouse, 3 deaths which occurred in the St. Albans Hospital, 1 death in the temporary Smallpox Hospital, and 1 death in the Sisters' Hospital for Infectious Diseases, of persons belonging to the Rural District, and deduct 1 death of a person who was not resident in the St. Albans district.

This gives us 213 as the corrected number of deaths in the district, and 14·8 as the true death-rate.

This is a decided improvement on last year, when the death-rate was 15·8.

Of these deaths, 42 were of children under one year of age, giving us a death-rate for infants of 2·9; 13 were of children between one and five; and 76 were of persons of 60 years old and upwards.

There is a decrease in the number of deaths at all ages, except of infants under 12 months, and a very marked decrease in the number of deaths of children between 1 and 5, owing in great measure to the comparative absence of Measles and Whooping Cough. There is also a considerable decrease in the number of deaths between 25 and 60, while amongst persons of 60 years old and upwards the number of deaths is about the same.

There were 25 deaths from diseases of the Nervous system, as against 25 in 1892; 18 from diseases of the Heart, as against 26; 47 from diseases of Lungs, as against 31; 11 from Phthisis, as against 17; 5 from other Tubercular diseases, as against 13; 12 from Cancer, as against 14; 8 from Influenza, as against 15; and 9 from various other Zymotic diseases, as against 21 in 1892.

A more detailed analysis is given in the accompanying tables.

Although our mortality last year was lower than it has been for some years, it was by no means so low as it was in the year 1890, when the total number of deaths was 159, and the death-rate 12·77. There is, however, a decided improvement on the last two years, when the death-rates were 15·8 and 16·6 respectively. When Influenza finally takes its departure from amongst us, we may expect our death-rate to fall to its former level.

Comparing the causes of the deaths registered in 1892 and 1893, we find the principal differences amongst those due to Phthisis and Tubercle, and to the various Zymotic diseases, the numbers being 16 and 17 respectively for last year, as against 30 and 36 for the year before. This is very satisfactory as regards the sanitary condition of the district.

The death-rate from Phthisis was 0·7, as against 1·1 for the previous year; from Phthisis and other Tubercular diseases together, 1·1, as against 2·1.

The 17 deaths from Zymotic diseases were made up as follows:—2 from Scarlet Fever, 2 from Diphtheria, 1 from Measles, 1 from Whooping Cough, 1 from Erysipelas, 2 from Diarrhœa, and 8 from Influenza.

The Zymotic death-rate was therefore including Influenza 1·1 or if Influenza be excluded 0·6 which is less than half what it has been for the two previous years.

I would attribute our lessened death-rate not only to the diminished prevalence of Influenza amongst us, but also to the exceptionally dry and warm weather which prevailed throughout the greater part of the year. On the other hand the extreme and unusual heat experienced during the Summer months exerted an unfavourable influence, and contributed to raise the mortality during that season. There were 40 deaths during the months of July and August, and the death-rate for these months was at the rate of 16·2 or considerably higher than the average for the year. February, March, October, and November had a mortality considerably below the average,—the healthiest month being October, when only six deaths were registered, giving a death-rate for that month at the rate of 4·9 per annum. No doubt the disappearance of Measles and Whooping Cough accounts to some extent for the diminished mortality amongst young children.

There were five deaths from Accident or Violence during the year:—one at Bricket Wood of a woman aged 36, who “cut her throat with a razor during a fit of temporary insanity, and died from shock caused by the wound and loss of blood”; one also at Bricket Wood of a man aged 49, who “committed suicide by drowning himself in the river Colne not then being of sound mind”; one at Harpenden of a young man aged 18, who “committed suicide by throwing himself in front of a train in motion on the Midland Railway”; one also at Harpenden of a man aged 41, who was “accidentally struck and killed by a train in motion on the Midland Railway”; and one at Sandridge of a child 3 days old, who died from “shock caused by fall from the mother at birth.”

During the year there were nine inquests held:—one on a young man aged 18, who died of “Rheumatic fever and Valvular disease of the Heart”; another on an old woman aged 81, who died of “Syncope”; a third on an old man aged 65, who died of “Failure of the Heart

consequent on some acute disease"; a fourth on an old man aged 71, who died of "Apoplexy"; and five on the cases of death from Accident or Violence mentioned above.

There were two uncertified deaths during the year, both in St. Stephen's parish :—one of a male infant of 10 months old, who was stated to have died of "Broncho-pneumonia," and the other also of a male infant aged 4 hours, the cause of whose death was said to have been "Congenital Debility."

During the year there were 385 births within the district—208 of boys and 177 of girls; the excess of births over deaths being 190. The birth-rate for the past year was, therefore, 26·8. The rate of mortality per 1000 registered births was 109·09.

Under the Infectious Diseases (Notification) Act, 19 cases of Smallpox, 87 cases of Scarlet Fever, 11 cases of Erysipelas, 5 of Diphtheria, 3 of Typhoid, and 1 of Puerperal Fever have been notified to me. Many of these cases I personally visited, and in all I am satisfied that all proper means were adopted to prevent the disease from spreading.

The past year has been one in which Zymotic diseases have been unusually prevalent not only in this district, but throughout the greater part of England. In the beginning of the year we had a number of cases of Smallpox, which, however, did not anywhere assume the proportions of an epidemic except in the immediate neighbourhood of St. Albans, owing no doubt, to the speedy removal of the greater number of the cases either to the Infectious Ward of the Union Workhouse or to the temporary Smallpox Hospital provided by the Urban Authority. In the month of January there were 15 cases, all with one exception being in the immediate neighbourhood of St. Albans; and in this case the infection was clearly traceable to St. Albans. Five of these cases were taken to the Infectious Ward at the Workhouse, five to the Hospital, and five treated at their own homes. In April two cases were notified, one from Wheathampstead and one from London Colney, and in May two cases also from London Colney and Wheathampstead. All these cases were removed to the Hospital. There is reason to believe that in London Colney there were several other mild cases which escaped recognition. All the cases occurring in the district were

vaccinated in infancy, and one of them proved fatal dying in the temporary Smallpox Hospital in St. Albans.

Scarlet Fever had been smouldering in the district since 1892, twelve cases having occurred during that year, mainly in Harpenden, Gustard Wood, and Sandridge. Four cases occurred in Harpenden in the first quarter of 1893. In May, June, and July there were eighteen cases in Harpenden, three in Wheathampstead, four in Redbourn, one in St. Stephen's, and four in St. Michael's in the immediate neighbourhood of St. Albans. In August and September there were eight cases in Wheathampstead, one in Harpenden, four in St. Michael's, one in St. Peter's, and one in Sandridge. In October there were five cases in St. Michael's, four in Sandridge, one in Redbourn, and one in Harpenden. In November five cases in St. Michael's, three in Harpenden, one in Sandridge, and one in Wheathampstead. In December we had four cases in Harpenden, two in St. Michael's, and one in St. Peter's.

Three of the cases of Diphtheria occurred in Harpenden in January, February, and March, but two of them were associated with Scarlet Fever. Another case occurred in April in Wheathampstead, and a fifth in Sandridge New Town, close to St. Albans, in October.

Three isolated cases of Typhoid occurred in July, September and October in Harpenden, Wheathampstead and St. Michael's respectively.

There was a good deal of Influenza in various parts of the district in the Spring when it assumed in some parishes the proportions of an epidemic; there was also a certain amount towards the end of the year. It was not, however generally of so severe a type as in former years. Two deaths were ascribed to this cause in Harpenden in March, one in Redbourn in March, one in St. Stephen's in January and another in May, one in St. Peter's in April, one in St. Michael's also in April, and one in December in Wheathampstead.

One death from Measles occurred in Harpenden in January, and one from Whooping Cough in St. Peter's in November; but the district has been practically free from these diseases throughout the greater part of the year.

The great event of the year, from a sanitary point of view, has been the opening in St. Albans of the Sisters' Hospital for Infectious Diseases, provided by the muni-

ficence of Sir J. Blundell Maple of Childwickbury. It has already been of considerable service to this district in checking the spread of Scarlet Fever, and no doubt its priceless utility will be more clearly demonstrated in the future. I am pleased to mention that the Rural Sanitary Authority has made an arrangement with the Urban Authority whereby the management is vested in a joint committee chosen out of both Authorities, the expenses to be shared in proportion to the number of patients admitted from each of the two districts. I hope the Rural Authority will follow the example of the Urban Authority, and admit all patients to the benefit of the Hospital without fee or charge.

I am sorry to say that in spite of the Smallpox epidemic the Vaccination in this district has not been as satisfactory as could be wished during the past year, though very much better than it was in the Urban district.

I am pleased to say that the Parochial Committee of Wheathampstead have at last decided to deal with the sewage in a satisfactory manner.

In the month of February I inspected 60 cottages in Sandridge New Town, just outside the boundaries of St. Albans, and found them all in a most insanitary condition. I reported this to the Sanitary Authority, and made certain recommendations; but I am sorry to say that all my recommendations have not been carried out. One of the matters I specially complained of was the existence in many of these cottages of w.c.'s without water laid on to them, and draining through unventilated soil pipes into dumb-wells which were also unventilated. It is very important I think that this state of matters should be remedied.

During the year I have made various sanitary inspections in different parts of the district,—at Wheathampstead, Harpenden, Sandridge, London Colney, Leverstock Green, etc. I am happy to say that my recommendations in most cases have been carried out.

I have visited most of the slaughter-houses in the district, and found everything in a tolerably satisfactory condition.

I have visited most of the bake-houses throughout the district, and found in most cases everything satisfactory.

I have visited most parts of the district in the course of

the year, but found nothing besides to call for special comment.

I have analysed 13 samples of water, with the following result:—Ten were good, one suspicious, and two bad—one of them very bad.

In conclusion, I beg to thank the Sanitary Authority for the courtesy and consideration which they have shown me. My best thanks are also due to the Inspector of Nuisances for his valuable assistance.

I am, Gentlemen,

Your most obedient Servant,

JOHN MORISON,

M.D. Edin., D.P.H. Cantab.,

*Medical Officer of Health to the St. Albans
Rural Sanitary Authority.*

March 1st, 1894.



ST. ALBANS RURAL SANITARY DISTRICT.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR 1893.

AGES AT DEATH.						
0—1	1—5	5—15	15—25	25—60	60—75	75 & upwds.
42	13	8	7	48	45	31

CAUSES OF DEATH.	Males.	Females.	St. Peter's.	St. Michael's.	St. Stephen's.	Sandridge.	Harpenden.	Redbourn.	Wheathampstead.	TOTAL.
Diseases of Nervous System	15	10	2	..	2	2	12	3	4	25
„ Circulatory „	4	14	..	2	7	..	5	2	2	18
„ Digestive „	5	8	3	..	1	..	5	3	1	13
„ Urinary „	3	1	1	..	..	..	1	1	1	4
„ Respiratory „	26	21	8	2	5	4	11	4	13	47
Phthisis	7	4	1	..	1	2	3	4	..	11
Scrofula	4	1	..	..	..	1	1	1	2	5
Cancer	5	7	2	..	2	1	3	2	2	12
<i>Zymotic Diseases—</i>										
Influenza	5	3	1	1	2	..	2	1	1	8
Typhoid Fever	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	1	1	..	..	..	..	2	..	..	2
Measles	..	1	1	..	..	..	..	..	..	1
Small-pox	..	..	..	..	..	..	..	..	..	..
Whooping Cough	..	1	..	..	..	..	1	..	..	1
Diphtheria	1	1	..	..	..	..	..	..	2	2
Erysipelas	1	..	..	..	..	..	..	..	1	1
Diarrhoea and Dysentery	1	1	1	..	..	..	1	..	..	2
Puerperal Fever	..	2	..	..	1	..	..	..	1	2
Rheumatic Fever	..	1	1	..	..	..	..	..	..	1
Atrophy and Debility	6	8	3	..	2	..	5	2	2	14
Premature Birth	3	2	1	..	..	1	1	1	1	5
Child-birth	..	1	1	..	..	..	..	..	..	1
Old Age	3	4	3	..	1	..	1	2	..	7
Injuries or Violence	3	2	..	..	2	1	2	..	..	5
Unclassified	5	2	..	..	1	1	3	2	..	7
TOTAL	98	96	28	5	29	13	59	28	33	194

ST. ALBANS RURAL SANITARY DISTRICT.

POPULATION AT ALL AGES.			MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.														REGISTERED BIRTHS.		
PARISH.	Census 1881.	Census of 1891.	At all ages.		Under 1 year.		1 to 5 years.		5 to 15 years.		15 to 25 years.		25 to 60 years.		60 and upwards.				
			m.	f.	m.	f.	m.	f.	m.	f.	m.	f.	m.	f.	m.	f.	m.	f.	
WHEATHAMPSTEAD	2319	2371	18	15	5	2	1	2	1	..	..	..	4	6	7	5	}	139	113
HARPENDEN	3064	3916	31	28	6	7	3	2	..	2	1	..	9	6	11	12			
REDBOURN	2177	2016	9	19	2	2	..	2	2	1	1	1	2	2	2	11			
SANDRIDGE	810	1125	9	4	4	1	..	..	..	..	..	..	1	1	4	2	}	69	64
ST. STEPHEN'S	1652	1868	14	13	3	..	..	1	1	..	1	2	3	5	6	5			
ST. PETER'S	1559	1852	14	15	4	5	1	..	..	1	1	..	4	4	4	4			
ST. MICHAEL'S	780	824	3	2	..	..	1	..	..	..	..	..	1	..	..	3	}		
TOTAL.....	12361	13972	98	96	24	18	5	8	4	4	4	3	24	24	34	42			

ST. ALBANS RURAL SANITARY AUTHORITY.

Report of Inspector of Nuisances for the Year ending Dec. 31st, 1893.

PARISH.	Privies cleansed and repaired.	New privies built.	New w.c.'s built.	Earth closets constructed.	Cesspools cleansed.	Drains cleansed and repaired.	House refuse and ashes removed.	Foul ditches cleansed.	Over-crowding abated—No. of cottages.	Cottages cleansed and disinfect.	Cottages closed.	Pigsties repaired and cleansed.	Manure removed.	Yards cleansed.	Bakehouses cleansed.	Slaughterhouses cleansed.	Wells repaired and cleansed.	Cesspools constructed.	Drains connected with sewer.	W.c.'s connected with sewer.	Water supplied—No. of houses.	Water analysed.	Sewage tanks and catchpits cleansed.	New wells constructed.	New buildings approved by the Board inspected during erection.	TOTALS.
ST. PETER (PART OF).....	50	1	7	3	3	5	31	2	1	17	..	1	2	11	4	4	..	4	..	..	3	1	8	2	8	168
ST. STEPHEN ,, ...	53	2	3	1	8	13	24	1	..	29	..	3	4	11	4	2	5	2	..	..	1	2	..	..	4	172
ST. MICHAEL ,, ...	36	..	6	2	1	1	11	..	..	5	..	1	1	4	..	..	..	3	..	..	6	3	..	..	7	87
SANDRIDGE ,, ...	30	1	..	15	5	7	7	2	..	31	..	2	2	1	2	..	1	..	..	..	..	2	16	..	2	126
WHEATHAMPSTEAD	47	2	4	1	3	5	29	1	..	29	..	4	4	11	5	3	2	..	1	2	..	1	20	3	3	180
HARPENDEN	126	1	28	3	38	24	48	..	..	60	..	6	11	22	9	5	7	11	..	..	22	5	..	..	25	451
REDBOURN	105	1	5	3	9	14	43	1	..	23	..	1	5	28	8	3	3	1	..	..	..	..	5	1	3	262
TOTALS.....	447	8	53	28	67	69	193	7	1	194	..	18	29	88	32	17	18	21	1	2	32	14	49	6	52	1446

